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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

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Examiner: ZHAO, DAQUAN

Serial No.: 10/613,400

Group Art Unit: 2621

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For: METHODS AND APPARATUS FOR
CLIENT AGGREGATION OF TELEVISION
PROGRAMMING IN A NETWORKED
PERSONAL VIDEO RECORDING SYSTEM

AMENDMENT AND RESPONSE TO OFFICE ACTION

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Sir:

In response to the Office Action mailed on October 19, 2007, Applicants submit the following amendments and remarks:

Amendments to the Claims begin on page 2 of this paper; and

Remarks begin on page 9 of this paper.

Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings, of claims in the application. Inserted material is underlined and deleted material is shown in strikethrough to show the changes made.

1. (Currently Amended) A method for aggregating television programming in a personal video recording ("PVR") system, said method comprising the steps of:
 - receiving a plurality of television signals;
 - tuning each of said television signals in one of a plurality of tuners;
 - buffering said television signals on a storage medium in at least a first PVR media server, the PVR media server maintaining a write position for the buffering;
 - coupling a plurality of clients, over a home-based network comprising one or more PVR media servers, to said first PVR media server;
 - generating a request from a requesting client for a list of television programming from each of said PVR media servers on said home-based network;
 - receiving, from each PVR media server, a list of television programming available through each of said respective PVR media servers, each PVR media server configured for presenting live broadcast content and prerecorded content; and
 - aggregating, at said requesting client, a list of ~~television-programming-information~~ content available from a plurality of locations within said PVR system, the list comprising the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server within the home-based network; and
 - presenting the aggregated list of content by using the requesting client.
2. (Original) The method as set forth in claim 1, further comprising the step of transmitting

buffered television signals from said PVR media server to said clients, so as to display television programs of said television signals at said clients;

3. (Original) The method as set forth in claim 1, wherein the step of generating a request for a list of television programming comprises the step of discovering PVR media servers on said network.

4. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across a plurality of PVR media servers.

5. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across at least one PVR media server comprising a plurality of television tuners.

6. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across a plurality of television service providers.

7. (Original) The method as set forth in claim 1, wherein said television programming comprises buffered live television.

8. (Original) The method as set forth in claim 1, wherein said television programming comprises television programming previously stored on said storage medium.

9. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system further comprises the step of determining whether television programming is unique from other television programming.

10. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of

television programming available on said PVR system comprises the step of aggregating a list of television programming by channel.

11. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by time slots.

12. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by television shows.

13. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by genre.

14. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by television show episodes.

15. (Original) The method as set forth in claim 1, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by actors appearing in television shows.

16. (Currently Amended) A computer readable medium comprising a plurality of instructions stored thereon, which when executed aggregate television programming in a personal video recording ("PVR") system, the computer readable medium comprising sets of instructions for:

receiving a plurality of television signals;

tuning each of said television signals in one of a plurality of tuners;

buffering said television signals on a storage medium in at least a first PVR media server,

the PVR media server for maintaining a write position for the buffering;

coupling a plurality of clients, over a home-based network comprising one or more PVR media servers, to said first PVR media server;

generating a request from a requesting client for a list of television programming from each of said PVR media servers on said home-based network;

receiving, from each PVR media server, a list of television programming available through each of said respective PVR media servers, each PVR media server configured for presenting live broadcast content and prerecorded content; and

aggregating, at said requesting client, a list of television programming content available from a plurality of locations within said PVR system, the list comprising the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server within the home-based network; and

presenting the aggregated list of content by using the requesting client.

17. (Original) The computer readable medium as set forth in claim 16, further comprising the step of transmitting buffered television signals from said PVR media server to said clients, so as to display television programs of said television signals at said clients;

18. (Original) The computer readable medium as set forth in claim 16, wherein the step of generating a request for a list of television programming comprises the step of discovering PVR media servers on said network.

19. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across a plurality of PVR media servers.

20. (Original) The computer readable medium as set forth in claim 16, wherein the step of

aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across at least one PVR media server comprising a plurality of television tuners.

21. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming across a plurality of television service providers.

22. (Original) The computer readable medium as set forth in claim 16, wherein said television programming comprises buffered live television.

23. (Original) The computer readable medium as set forth in claim 16, wherein said television programming comprises television programming previously stored on said storage medium.

24. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of determining whether television programming is unique from other television programming.

25. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by channel.

26. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by time slots.

27. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by television show.

28. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by genre.

29. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by television show episodes.

30. (Original) The computer readable medium as set forth in claim 16, wherein the step of aggregating a list of television programming available on said PVR system comprises the step of aggregating a list of television programming by actors appearing in television shows.

31. (Currently Amended) A personal video recording ("PVR") system comprising:

at least a first PVR media server comprising:

input for receiving a plurality of television signals;

a plurality of tuners for tuning each of said television signals;

a storage medium for buffering said television signals, the first PVR media server configured for maintaining a write position for said buffering;

a home-based network comprising one or more PVR media servers; and

a plurality of clients, coupled over said home-based network to said first PVR media server, the first PVR media server configured:

for generating a request from a requesting client for a list of television programming from each of said PVR media servers on said home-based network,

for receiving, from each PVR media server, a list of television programming available through said respective PVR media servers, each PVR media server configured for presenting live broadcast content and prerecorded content; and

for aggregating, at said requesting client, a list of television programming content available within said PVR system, the list comprising the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server within the home-based network; and

for presenting the aggregated list of content by using the requesting client.

REMARKS

Within the Office Action dated October 19, 2007, the Examiner rejected claims 1-3, 5, 7-8, 10-11, 16-18, 20, 22-23, 25-26 and 31 were rejected under 35 U.S.C section 103(a) as being unpatentable over United States Patent 7,089,321 B2 to Hayashi (Hayashi) in view of United States Patent 5,414,455 to Hooper et al. (Hooper). Claims 4 and 19 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claims 6 and 21 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claims 9 and 24 were rejected as being unpatentable over Hayashi and Hooper, and further in view of United States Patent Application 2003/0,154,493 A1 to Kagle et al. (Kagle). Claims 12-15 and 27-30 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper, and further in view of United States Patent 6,002,394 to Schein (Schein).

By this amendment Applicants amend claims 1, 16 and 31, but do not add or cancel any claims. Accordingly, claims 1-31 will remain pending in the application upon entry of this amendment.

I. Rejection of Claims 1-15

Claims 1-3, 5, 7-8 and 10-11 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claim 4 was rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claim 6 was rejected under section 103(a) as being unpatentable over Hayashi and Hooper, and further in view of Kagle. Claims 12-15 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper, and further in view of Schein. Claims 2-15 are dependent on claim 1.

Claim 1 recites a method for aggregating television programming in a personal video recording ("PVR") system. The method receives several television signals, tunes each of the

television signals in one of several tuners, and buffers the television signals on a storage medium in at least a first PVR media server. The first PVR media server is for maintaining a write position for the buffering. The method couples several clients, over a home-based network that includes one or more PVR media servers, to the first PVR media server. The method generates a request from a requesting client for a list of television programming from each of the PVR media servers on the home-based network. Each PVR media server on the home-based network is configured to present live broadcast content and prerecorded content. The method receives, from each PVR media server, a list of the content available through the respective PVR media servers, and aggregates, at the requesting client, a list of television programming information available from a plurality of locations within the PVR system. The list comprises the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server within the home-based network. The method presents the aggregated list of content by using the requesting client.

Applicants respectfully submit that the cited references do not disclose, teach, or even suggest such a method. For instance, Hayashi particularly teaches against installing a network of receivers, is directed to, and proclaims advantages of sharing a single wireless satellite broadcast receiver server, in contrast to claim 1. Moreover, Hayashi does not disclose maintaining a write position for the buffering. Hooper is directed to a video on demand system, and does not disclose a plurality of PVR media servers and clients within a home-based network. Neither Hayashi, nor Hooper disclose, teach, or even suggest aggregating and presenting, at the requesting client, a list of content, including live broadcast content and prerecorded content, available via multiple locations within the home-based network of a PVR system.

Accordingly, Applicants respectfully submit that the cited references do not render unpatentable claim 1. Since claims 2-15 are dependent on claim 1, Applicants respectfully submit

that the cited references do not render unpatentable claims 2-15 for at least the reasons discussed above in relation to claim 1. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2-15.

II. Rejection of Claims 16-30

Claims 16-18, 20, 22-23, 25-26 and 31 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claim 19 was rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claim 21 was rejected under section 103(a) as being unpatentable over Hayashi and Hooper, and further in view of Kagle. Claims 27-30 were rejected under section 103(a) as being unpatentable over Hayashi and Hooper, and further in view of Schein.

Claims 17-30 are dependent on claim 16. Claim 16 recites a computer readable medium having several stored instructions, which when executed aggregate television programming in a personal video recording ("PVR") system. The computer readable medium, more specifically, includes sets of instructions that receive television signals, tuning each of the television signals in one of several tuners, and buffer the television signals on a storage medium in at least a first PVR media server. The PVR media server is for maintaining a write position for the buffering. The instructions couple multiple clients, over a home-based network that includes one or more PVR media servers, to the first PVR media server. Each PVR media server is configured to present live broadcast content and prerecorded content. The instructions generate a request from a requesting client for a list of content from each of the PVR media servers on the home-based network. The instructions receive, from each PVR media server, a list of content available through each of the respective PVR media servers, and aggregate, at the requesting client, a list of content available from a plurality of locations within the PVR system. The list comprises the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server

within the home-based network. The instructions present the aggregated list of content by using the requesting client.

Applicants respectfully submit that the cited references do not disclose, teach, or even suggest such a computer readable medium. For instance, Hayashi particularly teaches against installing a network of receivers, is directed to, and proclaims advantages of sharing a single wireless satellite broadcast receiver server, in contrast to claim 16. Moreover, Hayashi does not disclose maintaining a write position for the buffering. Hooper is directed to a video on demand system, and does not disclose a plurality of PVR media servers and clients within a home-based network. Neither Hayashi, nor Hooper disclose, teach, or even suggest aggregating and presenting, at the requesting client, a list of content, including live broadcast content and prerecorded content, available via multiple locations within the home-based network of a PVR system.

Accordingly, Applicants respectfully submit that the cited references do not render unpatentable claim 16. Since claims 17-30 are dependent on claim 16, Applicants respectfully submit that the cited references do not render unpatentable claims 17-30 for at least the reasons discussed above in relation to claim 16. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the section 103(a) rejection of claims 16-30.

III. Rejection of Claim 31

Claim 31 was rejected under section 103(a) as being unpatentable over Hayashi and Hooper. Claim 31 recites a personal video recording ("PVR") system comprising at least a first PVR media server that includes an input, several tuners, and a storage medium. The input is for receiving several television signals. The tuners are for tuning each of the television signals. The storage medium is for buffering the television signals, and the first PVR media server is configured for maintaining a write position for the buffering. The system further includes a home-based network that has a

number of PVR media servers and several clients. The clients are coupled over the home-based network to the first PVR media server. The clients are for generating a request from a requesting client for a list of television programming from each of the PVR media servers on the home-based network. Each PVR media server is configured for presenting live broadcast content and prerecorded content. The request is for receiving, from each PVR media server coupled to the home-based network, a list of content available through each respective PVR media server, and for aggregating, at the requesting client, a list of television programming available within the PVR system. The list comprises the live broadcast content and the prerecorded content available for presentation at the requesting client via each PVR media server within the home-based network. The system presents the aggregated list of content by using the requesting client.

Applicants respectfully submit that the cited references do not disclose, teach, or even suggest such a home-based network system. For instance, Hayashi particularly teaches against installing a network of receivers, is directed to, and proclaims advantages of sharing a single wireless satellite broadcast receiver server, in contrast to claim 31. Moreover, Hayashi does not disclose maintaining a write position for the buffering. Hooper is directed to a video on demand system, and does not disclose a plurality of PVR media servers and clients within a home-based network. Neither Hayashi, nor Hooper disclose, teach, or even suggest aggregating and presenting, at the requesting client, a list of content, including live broadcast content and prerecorded content, available via multiple locations within the home-based network of a PVR system.

Accordingly, Applicants respectfully submit that the cited references do not render unpatentable claim 31. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 31.

CONCLUSION

Based on the foregoing remarks, Applicants believe that the application is in condition for allowance. If the Examiner has any questions regarding the case, the Examiner is invited to contact Applicants' undersigned representative at the number given below.

Respectfully submitted,

STATTLER | SUH, P.C.

Dated: November 01, 2007

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